Supreme Court, U.S.
FILED

08 - 513 OCT 14 2008

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No.

IN THE

Supreme Court of the United States

PSN ILLINOIS, LLC, PETITIONER

v.

IVOCLAR VIVADENT, INC., MICRO DENTAL LABS, AND NATIONAL DENTEX CORPORATION, AND DENTSPLY INTERNATIONAL, INC., AND DEN-MAT CORPORATION

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

PETITION FOR WRIT OF CERTIORARI

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QUESTIONS PRESENTED

1. Whether the Court below improperly applied the vitiation rule to the doctrine of equivalents and should a bright line rule be applied for this area of law?

2. Whether the Court below improperly affirmed summary judgment of no patent infringement?

RULE 29.6

Petitioner, pursuant to Rule 29.6, states that it is a privately held company. There is no publicly held corporation that owns more than 10% of its stock.

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OPINIONS BELOW

The opinion of the U.S. Court of Appeals for the Federal Circuit is dated May 6, 2008 and officially reported at 525 F. 3d. 1159, 86 USPQ 2d 1892 (Fed. Cir. 2008), and is reproduced at 1a – 18a.[1]

The unreported Opinions of the U.S. District Court for the Northern District of Illinois Eastern Division are dated May 29, 2007 and December 7, 2006, respectively, and are reproduced at 9a – 17a and 28a – 49a.

JURISDICTION

The judgment of the U.S. Court of Appeals for the Federal Circuit sought to be reviewed was decided on May 6, 2008, affirming the decision of the district court's grant of summary judgment of noninfringement. A timely petition for rehearing was denied on July 17, 2008. This petition is timely under 28 U.S.C. § 2101(c) and Supreme Court Rule 13.3 because it is being filed within 90 days of entry of the denial of the petition for rehearing of the opinion and judgment sought to be reviewed. This Court has jurisdiction to review the judgment of the U.S. Court of Appeals for the Federal Circuit under 28 U.S.C. § 1254(1).

RELEVANT PROVISIONS INVOLVED (see appendix)

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[1] Citations to the Appendix to the Petition are hereinafter referred to as __a. Citations to A___ refer to the Appendix used in the Federal Circuit.

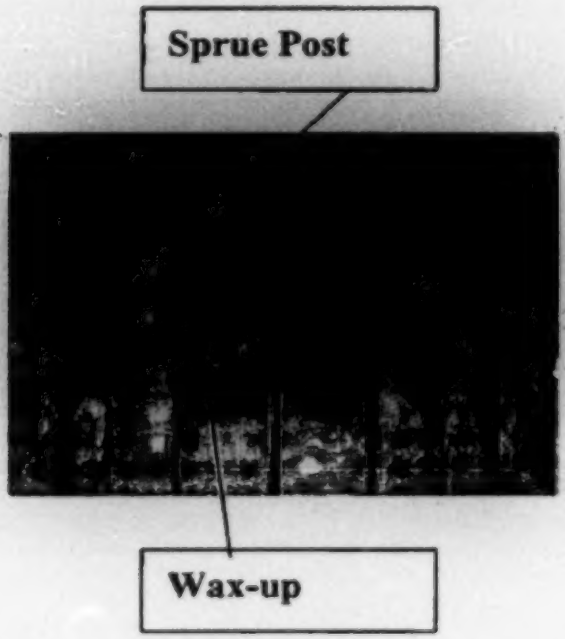
STATEMENT

This appeal involves the enforcement of U.S. Patent No. 4,579,530 titled "Fabrication of Porcelain Restorations" ("PSN's Patent"). In 1983, Dr. Gerard McLaughlin designed a process for making porcelain veneers that was more efficient and reliable than prior veneer making processes (A27). PSN's patent describes taking an impression of a patient's tooth, from which a hard model or "statue" of the patient's tooth is formed with investment material (A27, col. 2:24-29; A28, col. 3:54-66). Next, liquid slurry made of porcelain powder and water may be applied to the statue (A27, col. 2:30-34; A28, col. 4:4-11 and col. 4:22-36; A3273, 2nd col., last ¶). The porcelain is then heated or "fired" and hardened on the statue; the statue of investment material is removed or "eroded" by blasting it with particles such as glass beads, leaving the veneer intact (A27, col. 2:49-53; A28, col. 4:48-59; A3273, 2nd col., last ¶)[2]. Following its removal from the statue, the veneer is substantially fabricated other than the finishing and fitting operations performed first when it is fitted on the stone model (by a remote lab technician), and then again later when it is fitted on the human tooth by a dentist (A27, col. 2:49-60; A1343, ¶8; 1359-60, ¶20; A3723-24, ¶¶9-10; A3739-40, ¶¶10-11).

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[2] A principal way that PSN's patent claims distinguish from the prior art is the statue erosion step, which uses pressurized particles sufficiently hard to remove the statue made of investment material (A33, col. 2:10-13), but insufficiently hard to damage the veneer (see Claims 2 and 8, *e.g.*, A33). The reexamination file history (*e.g.*, A598-600) and a prior Federal Circuit decision (A3688) distinguishing the Calamia reference show how the eroding step distinguishes from the prior art, for example.

Respondent Ivoclar's accused Empress® process[3] enables dental labs to make and dentists to place, veneers (A89). It also begins with a dentist's impression of the patient's tooth (A1356, ¶9), from which a hard model is again created to replicate the patient's tooth upon which the veneer is to be cemented (A1319, ¶12(b); A1356, ¶¶9, 11; A1558). With the Ivoclar process, a second negative impression called a "wax-up" is created by forming wax over the model of the tooth in the shape of the veneer (A1356, ¶¶9-10; A1559). The veneer-shaped wax-ups are attached to sprue posts as shown below (A1152, Fig.5; A1356, ¶10; A1560):



(A1152, Fig. 5): Wax-ups with sprue posts on tooth replicas

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[3] The parties stipulated that the Respondents' accused processes are identical to Ivoclar's accused Empress® process for purposes of appeal (A34-38).

One or several "wax-ups" are placed into an investment cylinder, attached to its base, and investment material is poured over the "wax-up" (A1357, ¶¶13-14; A1563; A1152-53, Figs. 8 and 9; A1560):



(A1152)



(A1153)

After the investment material hardens, the cylinder is heated and the wax-up melts away through the hole left by the melted-away sprue, leaving a hole or "intaglio" in the shape of the veneer, formed by the hardened

statue (A1357, ¶14). An ingot of compressed porcelain powder, heated into a flowable state, is pressed into this intaglio and applied against the surface of the statue (A1352, ¶42; A1358-59, ¶16; A1566; A3294), inside the investment cylinder. During this process, an excess glob of porcelain forms around the vacated sprue post hole. The porcelain veneer inside the intaglio is hardened by heating or "firing," and the statue is then removed from the veneer using air-pressurized particles such as glass beads (A1359, ¶19; A1567). After statue removal, the veneer is finished by placing it back on the hard model (A1568), and removing any sharp or uneven surfaces using a diamond bur or disc, including trimming away the excess porcelain glob that formed around the vacated sprue post (A1568; A2272, beginning at clip 9 at 38.76 sec.; A1359-60, ¶20; A3723-24, ¶¶9-10). Porcelain "sprue" removal is accomplished in a matter of seconds (A2250; A2391; A2272, clip 9 at 38.76 sec. to 39.89 sec.). As with PSN's Patent example, the veneer is abraded and polished to a smooth finish (A1359-60, ¶ 20; A27, col. 2:54-57; A2175, Fig. 11-28), cleaned and glazed (A27, col. 2:56-57; A1570-71), and then sent back to the dentist for final finishing procedures, fitting to the patient's tooth (A29, col. 6:6-8; A3670, ¶2; A1343, ¶¶8-9; A1359-60, ¶20; A3723-24, ¶¶9-10), acid-etching of the tooth and, finally, cementing of the veneer to the patient's tooth (A29, col. 5:1-6; A3670, ¶2; A1359-60, ¶ 20).

This lawsuit began when PSN Illinois, LLC ("PSN") filed suit on November 9, 2004 against various dental restoration manufacturers and laboratories for infringement of the PSN Patent. Fourteen defendants were sued, and eight settled, acknowledging infringement (A857-62; A876-82; A1114-20; A3097-99;

A3103-17).[4] Respondent Ivoclar moved for summary judgment of noninfringement as to its accused Empress Process (A89). The district court found that the accused Ivoclar Empress Process does not infringe due solely to the claim limitation "ready for mounting":

> Eroding away said statue from said porcelain veneer restoration leaving said restoration ready for mounting on said tooth.

(A33). The district court construed this language to mean that after the statue is removed, the veneer can only be fitted, not finished, and then must be immediately mounted to the tooth. Because it found that "ready for mounting" only allows "fitting" operations to be performed on the veneer after statue removal (ensuring the veneer properly fits first the model, in the dental lab, and then the human tooth, in the dentist's chair), but not "finishing" operations (trimming, polishing and glazing the veneer) (26a; 40a; 45a), and that the accused processes finish the veneer after statue removal (as they must and has always been done in every veneer fabrication, including as shown in PSN's patent), the district court found no infringement.

Not surprisingly, given the claim language, the Federal Circuit disagreed with the district court's claim

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[4]Defendants in the district court case entered into consent judgment orders (CJOs) agreeing that PSN's patent is valid and infringed (A857-62; A876-82; A1114-20), and also entered into confidential settlement agreements agreeing to pay monetary damages to PSN (A3097-99; A3103-17). Past defendants in the California litigation also took licenses under the patent, agreeing to CJOs, and/or paying royalties (A2968-3096).

construction, finding that "ready for mounting" is broad enough to allow at least some finishing operations to be performed on the veneer following statue removal (13a). However, the Federal Circuit ruled that a particular finishing operation performed with the accused processes—sprue post removal--substantially changes the shape of the veneer, precluding even doctrine of equivalents infringement, under the "vitiation" doctrine (16a). It did so with little analysis, and completely ignored the unrebutted artisan testimony proffered by the Petitioner, PSN.

However, the sprue post is not a part of the veneer, as was established by the testimony of persons of ordinary skill in the art. Rather, they explain that the shape of the veneer in the accused processes before sprue post removal is the shape of the final veneer after sprue post removal, because veneer shape is created by the cavity/intaglio of the investment material (A1357-58, ¶14; A3718 ¶5). Sprue post removal is a quick finishing operation that does not alter the basic shape of the veneer (A1560). This Ivoclar video shows that it takes about one (1) second:

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A2272, clip 9 at 38.76 sec. and 39.89 sec. showing the speed of sprue removal.



A2272, clip 9 at 124 sec. showing sprue removal did not change the shape of the veneer.

Even if the sprue post is (improperly) assumed to be part of the veneer, the Federal Circuit's improper application of the vitiation rule here shows the need for a bright line rule.

REASONS FOR GRANTING THE PETITION

1. The Court below improperly applied the vitiation rule to the doctrine of equivalents, and a bright line rule should be applied for this area of law

To begin an infringement analysis under the doctrine of equivalents, this Court's prior cases have consistently applied prosecution history estoppel only where claims have actually been amended, *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 US 17, 32 (1997); *Festo Corp. v. Shoketsu Kinzoki Kogyo Kabushiki Co.*, 72 F.3d 857, 37 USPQ2d 1161 (Fed. Cir. 1995), *cert denied and judgment vacated*, 520 US 1111 (1997), *re'hg en banc after remand*, 234 F.3d 558, 56 USPQ2d 1865 (2000) (en banc), *rev'd* 535 US 722, USPQ2d 1705 (2002) *on remand*, 344 F.3d 1359, 1366, 68 USPQ2d 1321, 1325-26 (Fed. Cir. 2003), or where prosecution arguments show an "unmistakable surrender" was intended. *AquaTex Industries, Inc. v. Techniche Solutions*, 419 F.3d 1374, 1382-83, 76 USPQ2d 1213, 1219 (Fed. Cir. 2005). It has been well established that neither occurred here. During reexamination prosecution, various prior art references were distinguished as taking an impression of only a portion of the surface of a tooth, and not of substantially the whole tooth, which was defined as involving a minimum of portions of three sides of the tooth (A497, first full paragraph; A3478). These prior art references were concerned with inlays (A531-32), which fit into tapered cavities within a tooth, and not veneers made to cover a substantial portion of the tooth (*id.*). Thus, Mosteller and other prior art references were said to "take an impression of a **single surface** of the tooth..."

(A496, 2nd-to-last paragraph; emphasis in original); in contrast, the present invention was said to rely "upon the use of a tooth statue which inherently involves a minimum of portions of three sides of the tooth" (A497, 1st full paragraph). This was said not to be a "full statue of the tooth as is taught" by PSN's Patent (*id.*). Thus, "full statue" as used in the reexamination file history (*id.*; A591; A597) clearly includes structures having portions of three sides of the tooth, as Appellees' statues employ (A1324, ¶¶15-17; A1358, ¶15; A1557-60). No estoppel exists, and none was found by the district court or the Federal Circuit. Appellees employ a "full statue," which clearly was *not* disclaimed, so no prosecution history estoppel can exist. *AquaTex*, 419 F.3d at 1382 -1383, 76 USPQ2d at 1219 (rejecting prosecution history estoppel argument: "[W]e do not see the clear and unmistakable surrender of subject matter required to invoke argument-based prosecution history estoppel.")

Where the claims have not been limited by prosecution history estoppel, this Court finds that under the doctrine of equivalents a claim limitation not literally met may be satisfied by an element of the accused product if the differences between the two are "insubstantial" to one of ordinary skill in the art. *Warner-Jenkinson*, 520 U.S. at 25; *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605, 612 (1950). "While no particular linguistic framework controls the inquiry, *Boehringer Ingelheim Vetmedica, Inc v. Schering-Plough Corp.*, 320 F.3d 1339, 1351, 65 USPQ2d 1961, 1969 (Fed. Cir. 2003) citing *Warner-Jenkinson*, 520 US at 29, the insubstantial differences inquiry may be guided by determining whether the element in the accused device 'performs substantially

the same function in substantially the same way to obtain the same result' as the claim limitation." *Boehringer*, 320 F.3d at 1351, 65 USPQ2d at 1969, citing *Graver Tank*, 339 U.S. at 608.

This Court noted in *Warner* that a situation can arise in which there can be no equivalency because an equivalency finding would render the claim limitation at issue meaningless, or "vitiate" the claim limitation. *Warner-Jenkinson*, 520 U.S. at 39 f/n 8. *See also Depuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1018-19, 80 USPQ2d 1865, 1873 (Fed. Cir. 2006), citing *Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 149 F.3d 1309, 1315-16, 47 USPQ2d 1272, 1277 (Fed. Cir. 1996) (That a claim limitation is vitiated is a conclusion that "the evidence is such that no reasonable jury could conclude that an element of an accused device is equivalent to an element called for in the claim, or that the theory of equivalence to support the conclusion of infringement otherwise lacks legal sufficiency"). This Court left it to the Federal Circuit to "implement procedural improvements to promote certainty, consistency, and reviewability in this area of law." *Warner-Jenkinson*, 520 U.S. at 39 f/n 8.

Unfortunately, many Federal Circuit decisions have paid lip service to the vitiation doctrine rather than substantively inquiring into the actual differences between the claim element and the accused element. This has resulted in inconsistencies that would be avoided if the doctrine of equivalents test for infringement were properly applied before reaching a "vitiation" conclusion. In many cases the vitiation doctrine has been applied without real intellectual rigor, resulting in circular reasoning that does no more

than rubberstamp a doctrine of "no-equivalents" analysis.

For example, in *Moore U.S.A., Inc v. Standard Register Co.*, 229 F.3d 1091, 1105, 56 USPQ2d 1225, 1234 (Fed. Cir. 2000), the Federal Circuit conflated the tests for literal infringement and infringement under the doctrine of equivalents. There, the claim recited the use of an adhesive strip that extended over a "majority" of the marginal length of paper. After finding that a paper employing an adhesive strip extending 47.8% of the paper length did not literally infringe, the Federal Circuit summarily held that a finding of equivalence for the term "majority" would vitiate the "majority" claim element, and that any finding to the contrary would defy logic. *Id.* at 1106, 56 USPQ2d at 1234. This decision lacked any reasoning under the proper equivalence test. The Federal Circuit failed to analyze whether about 48% was an insubstantial variation from 50.1% under the totality of the circumstances. The vitiation doctrine should not be applied to foreclose such a substantive analysis.

Similarly, *Asyst Technologies, Inc. v. Emtrak, Inc.*, 268 F.3d 1364, 60 USPQ2d 1567 (Fed Cir. 2001), *appeal after remand*, 402 F.3d 1188, 1195, 74 USPQ2d 1272, 1278 (Fed Cir. 2005) was decided without an equivalence analysis or requiring the district court to do so. The patent-in-suit concerned a system in which microcomputers were "mounted" on workstations, and the accused device used a controller that was electrically connected to a work station. The district court concluded that the proper construction of mounted was "securely attached, affixed, or fastened to," and failed to analyze any equivalence; instead it

relied on a linguistic "specific exclusion" principle to avoid a lengthy analysis, holding for the purpose of equivalents that "an unmounted microcomputer means cannot be equivalent to a mounted one." *Asyst*, 402 F.3d at 1195, 74 USPQ2d at 1278.

Likewise, in *Novartis Pharmaceuticals Corp v. Eon Labs Mfg., Inc.*, 363 F.3d 1306, 70 USPQ2d 1438 (Fed. Cir. 2004), the claim language included the use of a "hydrosol" (i.e., containing water) used to administer the insoluble drug cyclosporine, so that the human body could absorb the cyclosporine. The accused infringers' drug was contained in a waterless capsule that became a "hydrosol" when it entered the body and mixed with the body's natural water. The Federal Circuit applied a narrow definition of "hydrosol" and in one sentence concluded that any expansion of the claim to encompass the accused process would read the "hydrosol" limitation out of the claim. *Id.*, 363 F.3d at 1312, 70 USPQ2d at 1442-43. By using the vitiation test to disqualify doctrine of equivalents infringement on the same basis as literal infringement, the Federal Circuit gave no range to the doctrine of equivalents. Had it done so, it is possible (but perhaps unlikely in Petitioner's view) that it would have reached the same result.

On the other hand, *Goldenberg v. Cytogen Inc.*, 373 F. 3d 1158, 71 USPQ2d 1255 (Fed. Cir. 2004) is an exemplary case where the Federal Circuit properly analyzed infringement under the doctrine of equivalents by considering the evidence before the district court. There, a patent concerned a method for detecting a tumor cell by targeting an "intracellular" antigen (within the cell). The accused product targeted

a "transmembrane" antigen (within and outside the cell). The Federal Circuit found that the district court erred in viewing the transmembrane antigen as one of two distinct categories of antigen, and found that the antigen was in a category of its own and might be an equivalent to either of those distinct categories if such a finding were made. The Federal Circuit found that there was evidence in the district court of equivalence. In opposing summary judgment, the Appellant (plaintiff) argued under the function-way-result test that the accused process provided substantially the same function (delivering a radioisotope to an antigen within a tumor cell), in substantially the same way (the antibody crossed the cell membrane) and achieved substantially the same result (the antibody bound the antigen to the cell). The Federal Circuit held that this presented a sufficient factual dispute to avoid summary judgment. *Id.* at 1168-69, 71 USPQ2d at 1263-64 (Immunomedics' comparison of the membrane-crossing ability required by the '559 patent presents a "lingering issue of fact precluding summary judgment.").

In short, the Federal Circuit has repeatedly used the vitiation test to disqualify doctrine of equivalents infringement on the same basis as literal infringement, and thus has failed to properly apply the test for substantial similarity, as required by this Court in *Warner-Jenkinson* and *Graver Tank*. Such an abbreviated analysis undercuts the very purpose of the doctrine of equivalents. It is Petitioner's belief that a bright line rule should be applied for this area of law. For uniformity in application, this Court should make clear that in every case an insubstantial differences inquiry should be conducted just as *Warner Jenkinson* and *Graver Tank* appear to require.

2. Summary judgment should have been denied under a proper application of the Doctrine of Equivalents, using the all elements rule

A district court's grant of summary judgment is reviewed *de novo* by the Federal Circuit in the light most favorable to the non-movant, and summary judgment is only appropriate if no genuine issues of fact exist and the movant is entitled to judgment as a matter of law. *Ethicon Endo-Surgery*, 149 F.3d at 1315-16, 47 USPQ2d at 1277. *See also Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1456, 46 USPQ2d 1169, 1174 (Fed. Cir. 1998) (en banc). Here, the Federal Circuit disregarded these standards in deciding this case under the doctrine of equivalents, and failed to perform an "insubstantial differences" inquiry before making a *per se* "vitiation" decision.

A common test for evaluating the substantiality of the differences is whether the accused element or step of the accused composition or process performs substantially the same function in substantially the same way to obtain substantially the same result as the claimed element [or process step]." *Upjohn Company v. Mova Pharmaceutical Corp.*, 225 F.3d 1306, 1309, 56 USPQ2d 1286, 1288 (Fed. Cir. 2000), citing *Graver Tank*, 339 U.S. at 608. *See also Warner-Jenkinson*, 520 U.S. at 40.

In this case, uncontested testimony from persons of ordinary skill in the art shows, at the least, that there is a genuine issue of material fact regarding infringement under the doctrine of equivalents. This unrebutted testimony shows that a sprue post is not a part of the veneer, so sprue post removal is not part of

finishing the veneer, and therefore not relevant to meeting the claim language (A1357-58, ¶14; A1359-60, ¶20). Even if the sprue were (improperly) assumed to be part of the veneer, the sprue post surface area footprint is less than 5% of the veneer surface area (Pet. for Re'hg., at 4[5].; A1560[6]). Contrary to the evidence, the Federal Circuit supported its vitiation finding by stating:

> Sprue removal on the other hand removes a substantial amount of porcelain and substantially changes the shape of the porcelain veneer from that present when the statue was eroded." (15a)..."But under the facts of this case—where the veneer of the accused Empress process must have the sprue removed and that edge shaped before the veneer is in its substantially final shape—we hold that no reasonable jury could conclude that the accused process includes an equivalent of the 'ready for mounting' limitation.

(16a). This factual finding that the sprue post constitutes a "substantial amount of porcelain" and "substantially changes the ... veneer" is new and was not found by the district court. It is not supported by the evidence. Only the Petitioner, PSN, provided evidence on this point, as opposed to attorney argument. Factual matters addressed by an expert declaration that are not refuted, as here, give rise to a genuine issue of material fact inappropriate for

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[5] Appellees did not contest Appellant's statement in its Petition for Rehearing on this point.

[6] Ivoclar's Instructions for Use show the geometry of the sprue post as insubstantial compared to that of the veneer.

summary disposition. *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1567, 19 U.S.P.Q.2d 1111, 1120 (Fed. Cir. 1991) (reversing summary judgment where only the non-movant provided evidence from a person of ordinary skill in the art, as here).

Uncontested artisan testimony also shows that post-statue-removal touching up/finishing procedures include trimming away excess porcelain, such as the porcelain sprue post glob (A1343, ¶8; A1359-60, ¶20; A3740, ¶11; A3723-24, ¶¶9-10). This is done in seconds (A2272) using the same bur tool used to remove excess porcelain as described by the inventor in 1990 (A2175). At most, sprue post removal is an insubstantial difference from removing excess porcelain as disclosed in the Patent examples (26a, 40a, 45a). *Overhead Door Corp. v. Chamberlain Group, Inc.*, 194 F.3d 1261, 1269, 52 USPQ2d 1321, 1326 (Fed. Cir. 1999) (reversing the grant of summary judgment in considering an affidavit with supporting evidence provided by one of ordinary skill in the art).

The Federal Circuit nonetheless improperly found that sprue post removal substantially changes veneer shape. But, this fact-finding should not have occurred at the appellate level, and was counter to the record in any event. Further, the "sprue" on the accused process is not part of the veneer, but is only a porcelain glob used for wax removal and handling. The Appellees even admit that the sprue post is not a part of the veneer, stating in their brief that:

> each veneer is then removed from the porcelain [sprue] post that solidified in the channel leading to the mold in which the veneer was formed.

> This is generally accomplished using a cutting disc.

(Jt. Br., at 20). Thus, there is not a substantial change made to the veneer in removing the sprue post, because the veneer was already formed within the mold (A1357-58, ¶14; A1359-60, ¶20). Additionally, even if the sprue post is considered part of the veneer, its removal cannot be considered a substantial variation in veneer shape. The "sprue" footprint is less than five percent of the entire surface area of the veneer, meaning "sprue" removal constitutes an insubstantial variation in the veneer's shape. (Again, no fact finding was conducted below on this point.)

This case should be remanded to the district court for a factual determination of whether Ivoclar's process involving sprue post removal is an "insubstantial difference" from the claim limitation "ready for mounting." This Court should also clarify that *Warner* and *Graver Tank* mandate an insubstantial differences inquiry in every case, which may not be eviscerated by a superficial "vitiation" finding.

CONCLUSION

The petition for a writ of certiorari should be granted.

Respectfully Submitted,

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2007-1512
UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

PSN ILLINOIS, LLC,
Plaintiff-Appellant,

v.

IVOCLAR VIVADENT, INC., MICRO DENTAL LABS, and NATIONAL DENTEX CORPORATION,
Defendants-Appellees,

and DENTSPLY INTERNATIONAL, INC.,
Defendant-Appellee,

and DEN-MAT CORPORATION,
Defendant-Appellee.

Appeal from United States District Court for the Northern District of Illinois in case no. 04-CV-7232, Judge Virginia M. Kendall.

May 6, 2008, Decided

COUNSEL: Michael P. Mazza, Michael P. Mazza, LLC, of Glen Ellyn, Illinois, argued for plaintiff-appellant. With him on the brief was Dana L. Drexler. Of counsel on the brief were Shawn M. Collins and Robert L. Dawidiuk, The Collins Law Firm, of Naperville, Illinois.

Steven M. Bauer, Proskauer Rose LLP, of Boston,

Massachusetts, argued for all defendants-appellees. With him on the brief for Ivoclar Vivadent, Inc., et al., were Jeremy P. Oczek; Robin K. Powers, Rothschild, Barry & Myers LLP, of Chicago, Illinois, for Ivoclar Vivadent, Inc. and Micro Dental Labs; Gary William Smith, of Posternak Blankstein & Lund LLP, of Boston, Massachusetts, for National Dentex Corporation; and Timur E. Slonim, Mintz, Levin, Cohn, Ferris, Glovsky & Popeo, P.C., of New York, New York, for Micro Dental Labs. On the brief for Dentsply International, Inc., were Harvey Freedenberg and Shawn K. Leppo, McNees Wallace & Nurick LLC, of Harrisburg, Pennsylvania; and Dean A. Monco, Wood Phillips, of Chicago, Illinois. On the brief for Den-Mat Corporation were Mark M. Supko and Michael I. Coe, Crowell & Moring LLP, of Washington, DC.

JUDGES: Before MICHEL, Chief Judge, LINN and PROST, Circuit Judges.

OPINION

MICHEL, *Chief Judge.*

PSN Illinois, LLC ("PSN") appeals from the district court's summary judgment of non-infringement which resulted in a stipulated judgment and dismissal. Stipulated Judgment and Dismissal, *PSN Ill., LLC v. Ivoclar Vivadent, Inc.*, No. 04-CV-7232, 2006 U.S. Dist. LEXIS 88691 (N.D. Ill. July 6, 2007). We heard oral argument on March 3, 2008. Although we conclude that the district court construed the claim term "ready for mounting" too narrowly, we nevertheless affirm the district court's summary judgment of non-infringement

because even under the correct claim construction, clearly no infringement occurred.

I.

PSN is the assignee of U.S. Patent No. 4,579,530 ("the '530 patent"), which claims a method of fabricating porcelain veneers for teeth. The patent originally issued in 1986, and a reexamination certificate issued in July 1989. Following reexamination, the '530 patent contained only one independent claim:

> 1. A method of fabricating a custom-made porcelain veneer restoration for a tooth without the use of a metal matrix comprising the steps of:
>
> a. preparing an impression of said tooth;
>
> b. forming from said impression a statue of said tooth out of an investment material;
>
> c. applying porcelain powder to the surface of said statue to build said veneer restoration conforming to the shape of the bonding surface of said tooth;
>
> d. firing the porcelain veneer restoration on said statue; and
>
> e. eroding away said statue from said porcelain veneer restoration leaving said restoration ready for mounting on said tooth.

In the specification, the patent describes first forming an impression of the patient's teeth. '530 patent, col.3 ll.48-53. The impression is then used to form a "statue" or model of the teeth out of investment material, which is generally temperature resistant and not as hard as the porcelain veneer. *Id.* at col.3 ll.54-66. Porcelain

powder, generally in a slurry, is used to build the veneer on the statue of the tooth. *Id.* at col.2 ll.30-34. The veneer is then fired on the statue. Next, the statue is eroded or blasted away with an abrasive material. *Id.* at col.2 ll.49-53.

In the summary of the invention, the specification suggests that several operations may be performed after the statue has been eroded, including touching up to smooth edges and removing undercuts, glazing, cleaning, etching, and coating with cement. *Id.* at col.2 ll.54-60. In the detailed description of the preferred embodiments, however, it teaches:

> While still on the statue, the veneer casing may be subject to a finishing treatment to improve the esthetics, such as bevel the incisal edge and feather the embrasures and the marginal area as close as possible to the finished margin. Also a glaze may be added. The support provided by the statue with the casing still mounted while such treatment is conducted is a feature of this invention.

Id. at col.4 ll.39-46.

Ivoclar and Dentsply, suppliers who sell materials used in the accused process, are accused of contributing to or inducing infringement. MicroDental and National Dentex are dental laboratories that manufacture veneers and thus are accused of direct infringement. Den-Mat acts as both a supplier and a dental laboratory. The parties have agreed for the purposes of this appeal that all of the accused processes are

"functionally identical" to Ivoclar's IPS Empress technique ("Empress process").

The accused Empress process is a "lost wax" process. Like the process of claim 1 of the '530 patent, the Empress process begins by taking an impression of the patient's tooth or teeth. A hard stone model is then created from the impression. Next, wax is placed on the model and formed into the desired shape of the veneer; this is called a "wax-up." Sprues (or wax posts) are then attached to the wax-ups. One or more wax-ups are placed in a cylinder, and the cylinder is filled with investment material. The cylinder is heated so that the wax-up and sprue melt, leaving a veneer-shaped void in place of the wax-up and a channel to the void in place of the sprue. An ingot, made from compressed porcelain powder that has been sintered, is then heated and pressed through the sprue-shaped void into the veneer-shaped void. After that, the investment cylinder is eroded away. What remains is the veneer attached to a porcelain sprue. The sprue is removed; the edge of the tooth to which the sprue was attached is finished; and additional finishing work is performed on the veneer prior to mounting it on the patient's tooth.

PSN sued fourteen defendants in the Northern District of Illinois, accusing them of infringing the claims of the '530 patent.[1] PSN settled with the majority of these defendants, who were subsequently dismissed from the lawsuit. The remaining defendants settled as to their other accused processes, such that only claims of infringement as to the Empress process discussed above, or processes that are functionally identical, remained in the case.

In July 2005, Ivoclar filed a motion for summary judgment of non-infringement as to its Empress process. In December 2006, the district court issued a memorandum opinion and order, construing certain claim terms and granting summary judgment of non-infringement. *PSN Ill., LLC v. Ivoclar Vivadent, Inc.*, No. 04-CV-7232, 2006 U.S. Dist. LEXIS 88691 (N.D. Ill. Dec. 7, 2006) ("*Summary Judgment Opinion*"). In particular, the district court construed "porcelain powder" as "a medium containing porcelain particles" because the specification disclosed applying porcelain powder as part of an "opaque water slurry" and not as porcelain powder without a medium. *Summary Judgment Opinion* at 7-8, 2006 U.S. Dist. LEXIS 88691, at *13-14. The district court also construed "statue" as "the positive, substantially entire version of the tooth, having at least portions of three sides of the tooth, formed by investment material from the impression. A synonym for a statue is a model." 2006 U.S. Dist. LEXIS 88691 at *15-16. Finally, the district court construed "ready for mounting" as "leaving the veneer restoration ready to be fitted to and cemented on a patient's tooth for which it was custom-made." 2006 U.S. Dist. LEXIS 88691 at *19.

The district court next evaluated whether Ivoclar was entitled to summary judgment that its Empress process did not infringe the claims as construed, either literally or under the doctrine of equivalents. First, as to "porcelain powder," the district court found that a genuine issue of material fact remained as to whether the ceramic ingot used by the Empress process could literally be porcelain powder and that this factual issue could not properly be resolved on summary judgment. 2006 U.S. Dist. LEXIS 88691 at *24-25. Next, the

district court held that no reasonable jury could find that the Empress process literally uses a "statue" because the Empress process "uses th[e] positive mold [of the patient's tooth] to make a negative model out of investment material"; the district court held that this "negative model" was not a "statue." 2006 U.S. Dist. LEXIS 88691 at *25. But the district court concluded that disputed issues of material fact remained as to whether "the combination of the initial model and the negative investment mold used in the Empress [process] are the equivalent of the '530 Patent statue." *Id.* Finally, the district court concluded that the Empress process could not infringe either literally or under the doctrine of equivalents because the veneer of the Empress process is not "ready for mounting" when removed from the investment material. 2006 U.S. Dist. LEXIS 88691 at *26. According to the district court, "the Empress veneer requires substantial finishing work after it is removed from the cylinder of investment material and before it is fitted and cemented to the patient's tooth." *Id.* The district court thus granted Ivoclar's motion for summary judgment of non-infringement. 2006 U.S. Dist. LEXIS 88691 at *27.

PSN then moved for reconsideration of the court's summary judgment order, arguing that the court had mistakenly found that PSN had not proposed a construction for "ready for mounting," had not considered PSN's expert testimony as to the construction of "ready for mounting," and erroneously interpreted the specification by limiting the interpretation of "ready for mounting" to a preferred embodiment. The district court denied PSN's motion for reconsideration. *PSN Illinois, LLC v. Ivoclar Vivadent, Inc.*, No. 04-CV-7232, 2007 U.S. Dist. LEXIS

38611 (N.D. Ill. May 29, 2007) ("*Reconsideration Opinion*"). The district court recognized that PSN actually had provided a proposed construction in its Local Rule 56.1 additional statement of material facts, but noted that PSN did not discuss or argue its construction in opposing the motion for summary judgment. *Reconsideration Opinion*, 2007 U.S. Dist. LEXIS 38611 at *4. Nevertheless, the district court addressed and rejected PSN's proposed construction (under which, a veneer would be "ready for mounting" even if finishing operations still needed to be performed on it) on the merits. 2007 U.S. Dist. LEXIS 38611 at *5-12. The district court also stated that it had considered the testimony of PSN's experts but found that reliance on expert testimony was unnecessary because the claims could be construed in light of the intrinsic record alone. 2007 U.S. Dist. LEXIS 38611 at *13-14. Thus, the court denied PSN's motion for reconsideration.

The parties then filed a stipulated judgment and dismissal of the remaining claims. As part of the order entering that judgment, the district court stated: "An appeal is immediately certified to the Federal Circuit Court of Appeals pursuant to 28 U.S.C. § 1295 as to the issues of claim construction and infringement involving the pressable processes referenced in Paragraph (1) of the Stipulated Judgment and Dismissal. The defendants' remaining, non-settled counterclaims are dismissed without prejudice." J.A. 37.[2] This appeal followed. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

II.

We review a district court's grant of summary judgment de novo. *Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 149 F.3d 1309, 1315 (Fed. Cir. 1998). At summary judgment, all facts and inferences must be construed in the light most favorable to the non-movant. *Id.* Summary judgment is only appropriate if no genuine issues of material fact exist and the movant is entitled to judgment as a matter of law. *Id*

A. *Claim Construction*

Claim construction is a question of law reviewed de novo. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454-56 (Fed. Cir. 1998) (en banc). We determine the ordinary and customary meaning of undefined claim terms as understood by a person of ordinary skill in the art at the time of the invention, using the methodology in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-19 (Fed. Cir. 2005) (en banc).

Claim 1, the only independent claim, requires "eroding away said statue from said porcelain veneer restoration leaving said restoration *ready for mounting* on said tooth." (emphasis added). The district court construed "ready for mounting" as "leaving the veneer restoration ready to be fitted to and cemented on a patient's tooth for which it was custom-made." *Summary Judgment Opinion* 2006 U.S. Dist. LEXIS 88691 at *21. On appeal, PSN argues that the district court incorrectly construed the term "ready for mounting" as excluding all finishing activities. We agree that the district court erred in holding that a veneer could not be "ready for

mounting" if any finishing step is performed following removal of the investment material.

The claim language itself provides no guidance as to what is meant by "ready for mounting," and the specification provides no explicit definition for "ready for mounting." Nevertheless, the specification illuminates the proper construction of the term. In the summary of the invention section, the specification teaches that some finishing steps may be performed after the statue is eroded:

> After cooling, the statue is then removed from the porcelain veneer by blasting with an abrasive material whose hardness is sufficient to erode away the investment material but not hard enough to damage the porcelain.
>
> The veneer casing produced by either the single or double bake process is *then* touched up to smooth all edges and remove all visible undercuts and, if desired, a glazing may be added. After cleaning, the interior surface of the veneer casing and the engaging surfaces of the tooth are etched and coated with a suitable cement to permit the veneer to be mounted and fixed in place.

'530 patent, col.2 ll.49-60 (emphasis added).

In describing a preferred embodiment of the invention, however, the specification teaches that finishing steps may be performed while the veneer is still on the statue:

> While still on the statue, the veneer casing *may* be subject to a finishing treatment to improve the esthetics, such as bevel the incisal edge and feather the embrasures and the marginal areas as close as possible to the finished margin. Also a glaze may be added. *The support provided by the statue with the casing still mounted while such treatment is conducted is a feature of this invention.*

Id. at col. 4 ll.40-47 (emphases added). Additionally, a detailed example in the specification discloses filling in embrasures with porcelain slurry, covering the surfaces with a glaze, and then removing the veneer from the investment material. *Id.* at col.5 l.66-col.6 l.8.

Based on the description of a preferred embodiment and particularly on the statement in that section that the support provided by the statue during finishing is "a feature of this invention," the district court construed "ready for mounting" to exclude subsequent finishing steps. The district court characterized the steps of cleaning, sterilization, etching, and adding cement as being associated with mounting, rather than finishing. *Summary Judgment Opinion*, 2006 U.S. Dist. LEXIS 88691 at *20. In denying PSN's motion for reconsideration, the district court rejected its contention that the definition of "ready for mounting" should also allow for finishing as well as fitting operations following statue removal. *Reconsideration Opinion* 2007 U.S. Dist. LEXIS 38611 at *5. Such finishing steps include "beveling, shaping, and glazing." 2007 U.S. Dist. LEXIS 38611 at *8. The district court found that adopting PSN's proposed construction would exclude (or "at the very least ignore") a preferred

embodiment because the proposed construction stated that finishing will take place after the statue is removed, while the description of a preferred embodiment states that "the support provided by the statue with the casing still mounted while such treatment is conducted is a feature of this invention." 2007 U.S. Dist. LEXIS 38611 at *10.

When read in context of the claim language and the specification, we find that the district court was incorrect in holding that the description of a preferred embodiment had more bite than the description in the summary of the invention. Notably, the description of a preferred embodiment states that "[w]hile still on the statue, the veneer casing *may* be subject to a finishing treatment to improve the esthetics." While the description of that preferred embodiment contemplates performing finishing operations while the veneer is still on the statue, the description in the summary of the invention contemplates possibly performing finishing operations following statue removal. Adopting a construction that allows for either (i.e., for some finishing to be performed either before or after statue removal) would neither exclude nor ignore the preferred embodiment, as the district court found.

PSN cited *Oatey Co. v. IPS Corp.*, 514 F.3d 1271, 1277 (Fed. Cir. 2008) as supplemental recent authority for the proposition that "[a]t leas[t] where claims can reasonably [be] interpreted to include a specific embodiment, it is incorrect to construe the claims to exclude that embodiment, absent probative evidence on the contrary." This statement from *Oatey* is not applicable in this case, because as discussed above, the

term "ready for mounting" can and should be construed in a way that encompasses the preferred embodiment.

Additionally, we note that *Oatey* is not a panacea, requiring all claims to cover all embodiments. Instead, courts must recognize that disclosed embodiments may be within the scope of other allowed but unasserted claims. Likewise, during prosecution, an applicant may have cancelled pending claims but not amended the specification to delete disclosure relevant only to the cancelled claims. In such cases, unasserted or cancelled claims may provide "probative evidence" that an embodiment is not within the scope of an asserted claim. This caution is relevant to the present case because claims 3-7 did not survive reexamination here. In particular, claims 5 and 7 were significantly broader than claim 1, and did not include the "ready for mounting" limitation.

Despite this prosecution history, the description in the summary of the invention and expert witness testimony support the conclusion that a person of ordinary skill in the art would understand that a veneer was "ready for mounting" after statue removal even if some "finishing" operations still needed to be performed. We conclude that the district erred in excluding all finishing steps and should have construed "ready for mounting" as "substantially fabricated such that only final finishing and fitting operations need be performed prior to mounting the veneer on a patient's tooth for which it was custom-made."

B. *Infringement*

With this corrected construction in mind, we turn to the district court's infringement analysis. PSN argues that the operations performed following removal of the investment material in the accused Empress process are merely finishing steps and thus the veneer of the Empress process is "ready for mounting" after the investment material is eroded. This argument is hollow, however, and we affirm the district court's summary judgment of noninfringement.

Under the correct construction, a veneer must be "substantially fabricated" to be "ready for mounting." In a hearing before the district court, PSN's counsel stated that for a veneer to be "ready for mounting," it must be "generally fabricated. Its color and shape are defined." J.A. 2852. We agree that for a veneer to be "substantially fabricated" its color and shape must be defined. The issue then becomes whether the shape of a veneer made in the Empress process is defined once the investment material is removed.

It is undisputed that in the accused process, following removal of the investment material, a sprue must be removed from the veneer and that edge of the veneer must be shaped. Because sprue removal is required after the investment material is eroded, the veneer's shape is not yet defined. The Empress process requires that substantial finishing be completed prior to mounting the veneer in the patient's mouth (removal of the sprue and shaping of the surface to which the sprue was attached in addition to true finishing steps such as touching-up and glazing). We thus conclude that a veneer made by the Empress process is not "ready for mounting" once the investment material is eroded.

PSN's arguments that sprue removal is a "finishing" step do not create a disputed issue of material fact as to infringement. In its reply brief on appeal, PSN conceded that to be "ready for mounting" when the statue is removed, "the veneer has been substantially formed out of porcelain, such that its size and shape is substantially complete." PSN also acknowledges that the sprue must be removed by the dental lab before the veneer is ready for final finishing and fitting procedures at the dentist's office. PSN tries to downplay the significance of sprue removal by stating that it can be done quickly and is done using the same tool as touching up. It also points to the expert testimony it proffered from the named inventor and a retained expert who owned and operated a dental laboratory that "sprue removal" is part of finishing. We find this testimony, however, to be wholly conclusory and thus insufficient to raise a disputed issue of material fact.

PSN also appears to characterize sprue removal as merely removing porcelain similar to other final finishing steps such as touching up rough edges.[3] But all operations that remove porcelain are not the same: touching up might remove a burr or rough edge but does not substantially change the shape of the porcelain veneer following statue removal; sprue removal on the other hand removes a substantial amount of porcelain and substantially changes the shape of the porcelain veneer from that present when the statue was eroded. We conclude that summary judgment of no literal infringement was proper.

Additionally, there can also be no infringement under the doctrine of equivalents because such a finding of infringement would read the "ready for mounting"

limitation out of the claim. Under the all-elements rule, "an accused product or process is not infringing unless it contains each limitation of the claim, either literally or by an equivalent." *Freedman Seating Co. v. Am. Seating Co.*, 420 F.3d 1350, 1358 (Fed. Cir. 2005) (citing *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29, 117 S. Ct. 1040, 137 L. Ed. 2d 146 (1997) and *Kustom Signals, Inc. v. Applied Concepts, Inc.*, 264 F.3d 1326, 1333 (Fed. Cir. 2001)). "[A]n element of an accused product or process is not, as a matter of law, equivalent to a limitation of the claimed invention if such a finding would entirely vitiate the limitation." *Id.* (citing *Warner-Jenkinson*, 520 U.S. at 29). To determine whether finding infringement under the doctrine of equivalents would vitiate a claim limitation, courts consider the totality of the circumstances, evaluating "whether the alleged equivalent can be fairly characterized as an insubstantial change from the claimed subject matter without rendering the pertinent limitation meaningless." *Id.* at 1359.

Having evaluated the facts and circumstances of this case, we find that allowing infringement under the doctrine of equivalents would render the "ready for mounting" limitation meaningless. We do not foreclose the possibility that a process could infringe under the doctrine of equivalents even if the veneer made by such a process was not literally "ready for mounting" once the investment material was eroded. But under the facts of this case--where the veneer of the accused Empress process must have the sprue removed and that edge shaped before the veneer is in its substantially final shape--we hold that no reasonable jury could conclude that the accused process includes an equivalent of the "ready for mounting" limitation.

Summary judgment of non-infringement was appropriate.

III.

For these reasons, the district court's grant of summary judgment of non-infringement is

AFFIRMED.

Footnotes

[1]The patent expired on November 21, 2004, shortly after the present suit was filed.

[2]We note that the district court's statement that an appeal was being certified to this court under Section 1295 was incorrect because Section 1295 simply states this court's jurisdiction and does not address or require "certification" of appeals. Nevertheless, a review of the record assures us that the stipulated judgment and dismissal along with the district court's prior orders, resolved the remaining claims as to all remaining parties. Thus, although no appeal was "certified," the district court's entry of the stipulated judgment and dismissal is a final judgment that we have jurisdiction to review.

[3]We note that PSN's suggestion that all steps which remove porcelain are finishing steps could be taken to ridiculous extremes. Under this rationale, sculpting the veneer from a square block of porcelain could be characterized as "removing porcelain"; yet an unformed block of porcelain would clearly not be "ready for mounting." Indeed, Gutzon Borglum might have

considered removing a burr from George Washington's nose at Mount Rushmore as final finishing, but we doubt he would have thought blasting the presidents' heads from unformed stone was finishing just because both processes involved "removing granite."

Case No. 04 C 7232
UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS,
EASTERN DIVISION

PSN ILLINOIS, LLC, Plaintiff,

v.

IVOCLAR VIVADENT, INC.; DENTSPLY INTERNATIONAL, INC.; DEN-MAT CORPORATION; MICRO DENTAL LABORATORIES; NATIONAL DENTEX CORPORATION; and KNIGHT DENTAL STUDIO, INC., Defendants.

May 29, 2007, Decided
May 29, 2007, Filed

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JUDGE: Virginia M. Kendall, United States District Judge.

MEMORANDUM OPINION AND ORDER

Plaintiff PSN Illinois, LLC. ("PSN") has brought suit against Ivoclar Vivadent, Inc. ("Ivoclar"); Dentsply International, Inc. ("Dentsply"); Den-Mat Corporation ("Den-Mat"); Micro Dental Laboratories ("Micro Dental"); National Dentex Corporation ("Dentex"); and Knight Dental Studio, Inc. ("Knight") for infringement of patent number 4,579,530 ("the '530 Patent") regarding porcelain tooth veneers. On December 7, 2006, this Court issued a memorandum opinion and order (the "Opinion") granting Ivoclar's Motion for

Summary Judgment of Non-Infringement. Ivoclar now moves this Court to reconsider its decision pursuant to Federal Rule of Civil Procedure 59. Dentex, Micro Dental, and Knight move together for summary judgment of non-infringement on the same grounds as Ivoclar, as does Dentex via separate motion.[1] Because the Court considered PSN's legal grounds for reconsideration as part of the Opinion, PSN's Motion for Reconsideration is denied. Per the stipulation by PSN that Dentex, Micro Dental, and Knight use the same process as Ivolar, the Motion of Dentex, Micro Dental, and Knight for summary judgment as to non-infringement is granted, and Dentex's motion is granted as relates to Ivoclar's process.

Discussion

In the Opinion, the Court construed the phrase "ready for mounting" in Claim 1 of the '530 Patent to mean, as proposed by Ivoclar, "leaving the veneer restoration ready to be fitted to and cemented on a patient's tooth for which it was custom-made." Opinion at 10. On the basis of the construction of the phrase "ready for mounting," the Court granted summary judgment for Ivoclar after finding that no reasonable jury could conclude that Ivoclar's manufacturing process left the tooth veneer ready for mounting after the investment material had been removed.

As part of the claim construction portion of the Opinion, the Court noted that PSN did not provide a proposed construction counter to that provided by Ivoclar. PSN brings to the Court's attention that PSN provided the Court with a proposed construction as part of its Local Rule 56.1 Additional Statement of Material Facts. PSN

does not dispute that it did not discuss or argue its proposed construction in its Opposition to the Motion for Summary Judgment, although it added a citation to the statement of fact that contained the construction. PSN also briefly referenced its proposed construction in its Response to Ivoclar's Short Supplement to its Motion for Summary Judgment. PSN's proposed construction for "ready for mounting" is: "the statue has been eroded from the veneer and is substantially fabricated other than finishing and fitting operations required for its placement on the tooth."

While the Court admits that it overlooked PSN's proposed construction and will address that proposed construction on its merits as part of this opinion, it bears mention that PSN is not entirely blameless for the error.[2] Claim construction is a matter of law; proposed claim constructions are not material facts and are inappropriate for placement in a Local Rule 56.1 statement. *See Kenall Mfg. Co. v. Genlyte Thomas Group LLC*, 439 F. Supp. 2d 854 (N.D. Ill. 2006) (legal conclusions regarding infringement and claim construction arguments do not comply with Local Rule 56.1). This Court is obligated under Local Rule 56.1 not to consider legal arguments and conclusions of law that parties place in their statements of undisputed facts. In both the Opposition and Response to Supplement briefs, PSN made the strategic decision to focus its argument on the reasons that Ivoclar's proposed construction should not be used rather than providing support for its own proposed construction.

Because the Court overlooked the presence of a proposed construction, however improperly stated, the Court will re-address the claim construction on the

merits. In the Opinion, the Court adopted Ivoclar's revised construction of "ready for mounting":

> Leaving the veneer restoration ready to be fitted to and cemented on a patient's tooth for which it was custom-made.

PSN's proposed construction for "ready for mounting" is:

> the statue has been eroded from the veneer and is substantially fabricated other than finishing and fitting operations required for its placement on the tooth.

The major difference in the two proposed constructions is the presence of the term "finishing" as a separate step from "fitting" that should be included in the construction of "ready for mounting." While the Opinion did not have the benefit of PSN's proposed language, the Opinion did analyze and conclude on the basis of the specification in the '530 Patent that "ready for mounting" did not include finishing steps. The Opinion specifically addressed the types of activities that PSN raises in its Motion for Reconsideration as "finishing" steps, including beveling, shaping, and glazing. Therefore, although PSN argues that it has been prejudiced by the Court's failure to consider PSN's proposed construction, the Court did discuss the finish steps and determine that the claim construction should not include them - the key difference in construction language that PSN proposed.

The Opinion also explained the reasoning behind the Court's decision that "finishing" could not be included in

the phrase "ready for mounting." While PSN chose to phrase its arguments on summary judgment as arguments against Ivoclar's construction (rather than in favor of its own construction), PSN made the same legal arguments in briefing that it now makes on reconsideration; the Opinion addressed those arguments and ruled against PSN. For the sake of completeness, those arguments are addressed again in brief.

First, PSN argues that a claim construction that does not cover the description in the summary of the invention is "rarely, if ever, correct." But PSN draws this quote from a case discussing the preferred embodiment, not the summary of the invention. That case, *Globetrotter Software, Inc. v. Elan Computer Group, Inc.*, 362 F.3d 1367, 1381 (Fed. Cir. 2004), states that "a claim interpretation that excludes a preferred embodiment from the scope of the claim 'is rarely, if ever, correct.'" The preferred embodiment in the '530 Patent would be excluded if PSN's proposed construction were to be adopted, the position that these exact cases counsel to be an incorrect result. PSN's proposed construction states that finishing will take place after the statue is removed, while the preferred embodiment states that "the support provided by the statue with the casing still mounted while such treatment is conducted is a feature of this invention." '530 Patent, Col. 4, ll. 43-46.

Ivoclar's proposed construction is consistent with the preferred embodiment, but PSN's proposed construction would exclude, or at very least ignore, the inventor's statement in the preferred embodiment that the support provided during finishing treatment has

significance in the invented process because it provides a structure during the finishing steps. The inventor's statement is not an expression of an option, or a suggestion of one method among many. The sentence describes a "feature" of the inventor's process. A description in the specification that specifically notes a feature of the invention can inform the Court of the proper construction of a claimed term. *See Boss Control, Inc. v. Bombardier, Inc.*, 410 F.3d 1372 (Fed. Cir. 2005) (where the specification limited a term to a process involving two steps in order, claim would not be construed broadly to allow for any step); *Inpro II Licensing, S.A.R.L. v. T-Mobile USA, Inc.*, 450 F.3d 1350, 1355 (Fed. Cir. 2006) (limiting a claim for an interface to a specific type of interface because the preferred embodiment specified it was an "important feature" and explained the purpose behind that feature). To construe the phrase "ready for mounting" to allow finishing after the investment material has been removed would be to ignore an aspect of the invention that the inventor himself felt important enough to highlight as one of the invention's features. This statement may be present in the preferred embodiment, but that alone does not allow the Court to ignore its implications.

Contrary to PSN's position, construing the claim "ready for mounting" to exclude finishing steps does not necessarily result in a complete exclusion of the summary of the invention. The Summary of the Invention describes single or double baking the veneer on the statue, allowing the statute to cool, and then removing the statue from the veneer. *See* '530 Patent, Col. 2, ll. 40-53. In the next paragraph, the summary describes touching up, smoothing, and possibly glazing

the veneer casing "produced by either the single or double bake process. Col. 2., ll. 54-56. The description of these steps follows the description of removing the investment material in the summary description, but do not dictate that the touching up necessarily follows the removal. The Summary is not clear on the sequence of removing the statue vis-a-vis finishing, but the preferred embodiment, as discussed above, is clear that the sequence of events is significant. Additionally, the prosecution history of the '530 Patent supports the statement in the Preferred Embodiment, and the Opinion's finding, that "ready for mounting" allows for fitting and cementing steps, but not for the finishing steps such as smoothing and glazing. In its brief appealing the results of a reexamination of the '530 Patent, Yukiyo (then the assignee of the '530 Patent) argued that the patented process smoothed and glazed the veneers prior to erosion of the investment material, consistent with the description in the preferred embodiment. *See* Def. Ex. 26 at 8-9.

Second, PSN argues that the Court should have recognized the ambiguity in the '530 Patent and relied upon the extrinsic evidence provided in the form of affidavits from experts Dr. Gerald McLaughlin (the inventor of the '530 Patent) and David Andrus, and that PSN suffered prejudice from the Court's failure to consider these expert affidavits. As explained above, the Court overlooked the single statement of material fact that contained PSN's proposed construction. But the Court reviewed the statement of material facts and the exhibits attached to the statement of fact, including the often-referenced affidavits of McLaughlin and Andrus. Contrary to PSN's assertions, PSN was not deprived of review of the testimony of those of

"ordinary skill in the art." This testimony is part of the record and was reviewed prior to publication of the Opinion. The Court did not choose to rely on the extrinsic evidence of expert testimony because the claims could be construed on the basis of the intrinsic evidence found in the language of the claims themselves and in the patent specification. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005) (in construing claims, expert testimony is "less significant than the intrinsic record in determining the legally operative meaning of claim language") (internal citations omitted). Extrinsic opinions from experts can help clarify the meaning of terms and can educate a court on the technology at issue in the case, but its use in construing claims is within the sound discretion of the court. *See Inpro II*, 450 F.3d at 1357.

Based on the intrinsic evidence alone, reading the phrase "ready for mounting" to include finishing steps would have the effect of reading out a feature of the preferred embodiment - a situation which case precedent counsels to be an inappropriate outcome. Therefore, the construction of the phrase "ready for mounting" in Claim 1 of the '530 Patent remains, as it was in the Opinion, "leaving the veneer restoration ready to be fitted to and cemented on a patient's tooth for which it was custom-made."

Conclusion

Because the previous Opinion addressing the construction of the claims in the '530 patent did not err as a matter of law, PSN's Motion for Reconsideration [407] is denied and the Court's previous Opinion granting summary judgment in favor of Ivoclar stands.

By stipulation, the Motion of Dentex, Knight, and Micro Dental for Summary Judgment on grounds that Ivoclar's process does not infringe the '530 Patent [445] is granted.

Virginia M. Kendall, United States District Judge

Northern District of Illinois

Date: May 29, 2007

Footnotes

[1]Dentsply and Den-Mat move for summary judgment on grounds distinct from those argued by Ivoclar, and Dentex moves for summary judgment on the same grounds as Dentsply and Den-Mat. In order to avoid confusion, the Motions filed by Dentsply and Den-Mat (and their impact on Dentex) will be addressed in a separate opinion.

[2]Ivoclar also apparently missed the proposed construction in PSN's 56.1 Statement of Additional Facts. Ivoclar stated in its Reply to the Motion for Summary Judgment that PSN had not provided a proposed construction. Reply Mem. in Support of Summary Judgment at 8 (Docket No. 248).

Case No. 04 C 7232
UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS,
EASTERN DIVISION

PSN ILLINOIS, LLC, Plaintiff,

v.

IVOCLAR VIVADENT, INC., et al., Defendants.

December 7, 2006, Decided
***

JUDGES: Virginia M. Kendall, United States District Judge.

MEMORANDUM OPINION AND ORDER

PSN Illinois, LLC ("PSN") has sued Ivoclar Vivadent, Inc. ("Ivoclar") and numerous other defendants for infringement of PSN's Patent No. 4,579,530 (the '"530 Patent"). Defendant Ivoclar moves for summary judgment on the issues of non-infringement and laches separately from the other defendants. This Court ruled on October 11, 2005 that a genuine issue of material fact exists with respect to the affirmative defense of laches.[1] This opinion addresses Ivoclar's Motion for Summary Judgment on non-infringement. Because Ivoclar's product does not infringe on the '530 Patent either literally or under the doctrine of equivalents, summary judgment for Ivoclar on the issue of non-infringement is granted.

Background

The '530 Patent

The '530 Patent describes an innovation in the design and construction of porcelain tooth veneers. The original '530 Patent was filed on November 21, 1984 and issued on April 1, 1986 to Dr. Gerald G. McLaughlin ("McLaughlin"), the named inventor. It was later reexamined by the United States Patent and Trademark Office, which narrowed the scope of the claims to porcelain veneers via a reexamination certificate issued July 11, 1989. The '530 Patent expired November 21, 2004.

Rather than describe the patent in the Court's own words because the claimed terms are in dispute, the '530 Patent claims the following:

1. A method of fabricating a custom-made porcelain veneer restoration for a tooth without the use of a metal matrix comprising the steps of:

   a. preparing an impression of said tooth;

   b. forming from said impression a statue of said tooth out of an investment material;

   c. applying porcelain powder to the surface of said statue to build a veneer restoration conforming to the shape of the bonding surface of said tooth;

d. firing the porcelain veneer restoration on said statue; and

e. eroding away said statue from said porcelain veneer restoration leaving said restoration ready for mounting on said tooth.

'530 Patent, Def. Ex. 1 at col.6 11.35-50; '530 Reexamination, Pltf. Ex. D at col 1, 11. 14-31. The specification of the '530 Patent describes the application of porcelain powder to the surface of the statue via an opaque water "slurry" containing the porcelain powder. '530 Patent, col. 4, 11. 4-12. The specification also describes bevelling, glazing, and providing other finishing treatment to the veneer while the veneer remains attached to the statue. The '530 Patent specification states that "the support provided by the statue with the casing still mounted while such treatment is conducted is a feature of this invention." '530 Patent, col. 4, 11. 44-47.

The Empress Product

Ivoclar markets and sells its trademarked Empress veneer technique ("Empress"), also known as the "Lost Wax" technique, for the creation of porcelain tooth veneers.[2] The Empress process takes an impression of the customer's teeth and makes a mold from the impression out of a hard stone material. After the mold has been created, the Empress process coats the front and sides of a molded tooth with a wax substance to make a new mold, and attaches a wax sprue, or handle, to the top of each wax mold. The wax mold of the tooth veneer is then placed into the center of a cylindrical

container with the sprues attached to the base of the container. More than one tooth can be placed in the cylindrical container at the same time; for example, Ivoclar's description of its process in its own literature shows 4 wax molds in one cylindrical container at the same time.

Once the wax molds are in the cylindrical container and anchored to the base, the cylindrical container is filled with an investment material until it completely covers the wax molds and sprues. When the investment material has hardened, the container and anchoring base are removed, leaving the wax molds and wax sprues suspended in the hardened cylinder of investment material with the ends of the sprues just reaching the outer surface of the investment material. The cylinder of investment material is placed in a kiln and heated to the point that the wax molds melt away, leaving a negative mold of the tooth veneer suspended in the investment material and a passage to the exterior of the cylinder.

After the reverse mold of the tooth veneers has been created, the cylinder is placed into a plunger with the passages facing up. A solid ceramic ingot is also placed in the plunger, suspended above the cylinder. The plunger, with cylinder and ingot in place, is placed into a press furnace. When the ceramic ingot becomes sufficiently hot it reaches a "flowable" or molten state, at which time the ingot is pressed downward by the plunger so that the flowable material moves through the passages and fills the negative molds of the tooth veneers.

Once cooled, the investment material is stripped away,

revealing porcelain sprues attached to porcelain veneers. The Empress process grinds away the porcelain sprues, and then glazes, polishes, and contours each porcelain veneer, after which it can be prepared for and mounted on the customer's tooth.

Background to Litigation

As discussed in the October 11, 2005 opinion, during the mid 1990's the '530 Patent was held by Yukiyo, Ltd. ("Yukiyo"). McLaughlin was president of Yukiyo. In the mid-1990's, Yukiyo asserted the '530 Patent against multiple dental laboratories, but did not assert the patent against Ivoclar or the Empress product. The cases were consolidated in the Northern District of California, *In re Yukiyo Patent Lit.* The *Yukiyo* court bifurcated trial on infringement and patent invalidity. After a ruling on claim construction, the invalidity case went to trial and a jury trial upheld the '530 Patent's validity. The Federal Circuit upheld the jury verdict on validity in an interlocutory appeal, after which the defendant dental laboratories settled with Yukiyo. Both parties have used the claim construction in the *Yukiyo* court as a basis for their proposed claim constructions to this Court, and have submitted the *Yukiyo* court's claim construction order as a supporting document in this case.

After Yukiyo and McLaughlin assigned the '530 Patent to PSN, PSN asserted the patent before this Court against Ivoclar and several dental laboratories for their sale and use of the Empress product. Ivoclar moved for summary judgment that its Empress product does not infringe the '530 Patent, and that any claim against Ivoclar by PSN is barred by the affirmative defense of

laches. In the October 11, 2005 opinion and order, the Court addressed solely the affirmative defense of laches and determined that a genuine issue of material fact exists as to the extent and time period of McLaughlin's knowledge of the Empress product. The October 11, 2005 Opinion did not address claim construction or summary judgment on grounds of non-infringement.

Discussion

The Court uses a two-step analysis to determine whether a patent is infringed. First, the Court construes each of the disputed claims. *Conoco, Inc. v. Energy and Environmental Int'l , L.C.*, 460 F.3d 1349, 1358 (Fed. Cir. 2006). Then, the properly construed claims are compared to the allegedly infringing product. *Id.* The parties dispute the construction of the phrases "porcelain powder," "statue" and "ready for mounting" in Claim 1 of the '530 Patent.

Claim Construction

Claim construction resolves disputed meanings in a patent to clarify and explain what the claims cover. *Terlep v. Brinkmann Corp.*, 418 F.3d 1379 (Fed. Cir. 2005). Claim construction is an issue of law for the court to decide. *Id., citing Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970-71 (Fed. Cir. 1995). The terms of a claim are given the ordinary and customary meaning that the terms would have to a person of ordinary skill in the art at the time of the filing date of the patent application. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005). In construing claims, courts look to intrinsic evidence - the words of the claims, the specification, and the

prosecution history - as well as extrinsic evidence such as expert testimony, scientific principles, and technical publications. *See Conoco*, 460 F.3d at 1362.

"Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Phillips*, 415 F.3d at 1313. The specification of a claim is usually dispositive; "it is the single best guide to the meaning of a disputed term." *Id.* at 1315, *citing Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). While courts may rely upon extrinsic evidence of the relevant art, it is "less significant than the intrinsic record in determining the legally operative meaning of the claim language." *Phillips*, 415 F.3d at 1317, *quoting C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 862 (Fed. Cir. 2004).

With respect to the use of dictionaries, technical or general, the *Phillips* court addressed in detail in an *en banc* decision the relationship between definitions in dictionaries and the patent specification. The *Phillips* court acknowledged the competing lines of cases concerning the use of dictionaries in construing claims. *See Phillips*, 415 F.3d at 1319. While affirming that dictionary definitions can be used as extrinsic evidence in claim interpretation and may be helpful for courts seeking to understand the meaning of a term to one of ordinary skill in the art, the *Phillips* court made clear that substantial reliance on dictionary definitions improperly "limits the role of the specification in claim construction to serving as a check on the dictionary meaning of a claim term. . ." *Id.* at 1320. The

Phillips court upheld the approach taken in *Vitronics* that judges may consult dictionaries and technical treatises "so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents." *Phillips*, 415 F.3d at 1322-23.

"Porcelain Powder"

Ivoclar asks the Court to construe the claim "porcelain powder" as "porcelain matter in a finely divided particulate state." Def. Mem. at 3. PSN, on the other hand, seeks to construe the same claim as "a medium containing porcelain particles." Defendant's Local Rule 56.1 Statement of Facts, Ex. 14 (hereafter "Def. 56.1 Ex. "). The parties do not dispute that the '530 Patent describes applying a porcelain powder that has been mixed into an "opaque water slurry," while the Empress product uses a "ceramic ingot" that has been heated into a "flowable" state.

Ivoclar relies on several technical dictionary definitions of "powder" as "finely divided particles." *See* Def. 56.1 Exs. 15-17. Therefore, maintains Ivoclar, a hard ceramic ingot cannot be a powder. But the *Phillips* decision specifically cautions courts against using the analysis urged by Ivoclar- that is, reading the claimed term in insolation and relying upon a dictionary definition of that term that is at odds with the use of the term throughout the specification of the patent. *See Phillips*, 415 F.3d at 1321. A person of ordinary skill in the art is presumed to read the claimed term in the context of the entire patent. *Phillips*, 415 F.3d at 1313. Ivoclar maintains that only powder, and not a solid form of powder, can be a "powder" in the '530 Patent.

But taking Ivoclar's proposed construction to its logical conclusion, the claimed step "applying porcelain powder to the surface of said statue" would mean that someone following the '530 Patent must apply powder, alone, to the surface of the statue to form the veneer. At no point in the '530 Patent summary, preferred embodiment, or example does the Patent describe use of the porcelain powder without a medium. To the contrary, the specification describes complimentary functions for the medium, such as adding pigment to the medium to render the porcelain opaque. *See* '530 Patent, col. 4, ll. 4-9.

The preferred embodiment and example in the '530 Patent describe applying the porcelain powder to the statue after mixing it with water. To read the term "porcelain powder" as excluding porcelain powder in a medium, as proposed by Ivoclar, would make it impossible to make the invention as described. *See Hoechst Celanese Corp. v. BP Chems. Ltd.*, 78 F.3d 1575, 1578 (Fed. Cir. 1996) ("[I]t is unlikely that an inventor would define the invention in a way that excluded the preferred embodiment, or that persons of skill in this field would read the specification in such a way.") Therefore, the Court construes the claim "porcelain powder" as proposed by PSN: a porcelain powder is a medium containing porcelain particles.

"Statue"

Ivoclar asks the Court to construe the claimed term "statue" consistent with the *Yukiyo* court's construction:

> Statue means the positive, substantially entire version of the tooth formed by the investment material when formed within the impression. A synonym for statue is model or die.

Def. 56.1 Ex. 13. PSN believes that the term "statue" should have a modified construction from that provided by the *Yukiyo* court:

> Statue means the positive, substantially entire version of the tooth *having at least portions of three sides of the tooth* formed by the investment material *from* the impression.

Def. 56.1 Ex. 14:

When construing a claim, "the context in which a term is used in the asserted claim can be highly instructive." *Phillips,* 415 F.3d at 1314. In claim 1 of the '530 Patent, the claim describes forming a statue "from said impression" of the tooth. '530 Patent, col. 6, ll. 40-42. It does not extend the definition to forming the statue "within the impression" as in the *Yukiyo* court's construction. Although the preferred embodiment describes a statue that is "cured and removed from the mold," there is nothing in the patent specification that suggests that the creation of the statue must be limited to that method. "From the impression," as explicitly stated in Claim 1, is sufficient to define the formation of the claimed "statue."

During the course of claims construction briefing, Ivoclar amended its proposed claim construction to remove the phrase "having at least three sides of the tooth" in order to conform to the *Yukiyo* court's

construction that contained no such language. PSN proposes a modified version of Ivoclar's initial proposal by defining a statue as having "at least portions of three sides of the tooth." On the basis of the '530 Patent specification and McLaughlin's statements during the prosecution history, PSN's proposed language better defines "statue" than Ivoclar's revised proposal containing no such language. As Ivoclar itself noted in its reply brief, McLaughlin distinguished the '530 Patent from prior art by noting that his patent taught a "full statue of the tooth" rather than only a single surface and that "the present invention relies upon the use of a tooth statue which inherently involves the use of three sides of the tooth." Def. 56.1 Ex. 10 at 22; Def. Reply Mem. at 6. Because Ivoclar's evidence directly supports the construction proposed by PSN and the specification of the Patent comports with the construction, the Court accepts this portion of PSN's proposed construction.

PSN disputes the use of the terms "model" and "die" as synonyms for "statue" because they may create confusion due to their other uses in the dental veneer field. Pltf. Resp. at 7. While this may be the case for the word "die," which may have other meanings to those skilled in the art and may therefore cause confusion, the synonym "model" is used both in ordinary language as a synonym for statue, and in this case has been used by the inventor himself in the specification as a synonym for the claimed term "statue." *See* col. 3 ll. 45 ("A model or statue of the tooth or teeth is then produced from the mold."). "The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." *Nystrom v. Trex Co., Inc.*, 424

F.3d 1136, 1142 (Fed. Cir. 2005) *quoting Phillips*, 415 F.3d at 1316). Since the term model assists a reader in understanding the use of the term "statue" in the context of dental work, that term is retained from the *Yukiyo* court's construction.

"Statue" means the positive, substantially entire version of the tooth, having at least portions of three sides of the tooth, formed by the investment material from the impression. A synonym for a statue is a model.

"*Ready for Mounting*"

Finally, the parties dispute whether the phrase "ready for mounting" in claim 1 can imply any steps other than mounting the porcelain veneer onto the customer's tooth, Ivoclar initially proposed the following construction:

> A veneer is ready for mounting when the veneer restoration does not require any additional finishing subsequent to eroding away the statue in order to fit the porcelain veneer restoration to the tooth.

Def. 56.1 at P 35. After PSN responded to Ivoclar's construction, Ivoclar revised its proposed construction to:

> Leaving the veneer restoration ready to be fitted to and cemented on a patient's tooth for which it was custom-made.

Def. Supp. Mem. at 3. PSN does not provide a proposed construction.

The '530 Patent summary describes performing touch-ups, smoothing, and if desired, adding a glaze after the veneer has been removed from the statue. *See* col. 2, 11. 52-60. But the preferred embodiment section describes finishing treatments performed while the veneer is still attached to the statue, and the example section describes glazing the veneer and then re-firing the veneer prior to removing the veneer from the statue. *See* col. 4, 11. 40-47; col. 5 11. 65 - col. 6 11. 2. Tellingly, the preferred embodiment specifically states that "the support provided by the statue with the casing still mounted while such treatment is conducted is a feature of this invention." Col. 4, 11. 44-47.

While two parts of the patent specification may be internally inconsistent, the plain meaning of "ready for" and the specific affirmation of the statue's presence during finishing as "a feature of this invention" support Ivoclar's proposed construction. Reading the claimed term "ready for mounting" to include finishing steps after the statue has been removed effectively reads the disputed phrase out of the claim. *See, e.g. Texas Instruments, Inc. v. U.S. Int'l Trade Comm.*, 988 F.2d 1165, 1171 (Fed. Cir. 1993) (rejecting a proposed claim construction because it would "render the disputed claim language mere surplusage").

PSN also argues that the specification's references to cleaning, sterilization, etching, and adding cement to the veneer support PSN's position that the patent contemplates additional steps between removing the statue and mounting the veneer on the tooth. But these steps described by PSN are steps associated with mounting rather than finishing. *See* col. 2, 11. 57-60 (describing cleaning, etching and adding a cement

coating "to permit the veneer to be mounted and fixed in place"). Therefore, "ready for mounting" means "leaving the veneer restoration ready to be fitted to and cemented on a patient's tooth for which it was custom-made."

Summary Judgment of Infringement

"Infringement, whether literal or under the doctrine of equivalents, is a question of fact." *Depuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, – F.3d –, 469 F.3d 1005, 2006 U.S. App. LEXIS 28673, 2006 WL 3346155 at *3 (Fed. Cir. Nov. 20, 2006). Ivoclar cannot prevail on summary judgment until the undisputed evidence shows that Ivoclar has neither literally infringed the '530 Patent, nor infringed under the doctrine of equivalents. "The proper inquiry is whether the evidence is such that a reasonable jury could return a verdict for the non-movant." *Cook Biotech, Inc. v. Acell, Inc.*, 460 F.3d 1365, 1373 (Fed. Cir. 2006). In reviewing a motion for summary judgment, the court makes all justifiable inferences in favor of the non-movant. *Id.*

Ivoclar has literally infringed the patent if its product contains embodies each of the claimed elements and limitations. *Kraft Foods, Inc. v. Int'l Trading Co.*, 203 F.3d 1362, 1370 (Fed. Cir. 2000). Thus, given the issues presented by the parties to the Court and given the Court's construction, Ivoclar's Empress product will not literally infringe unless it: 1) uses a porcelain powder, 2) uses a statue, and 3) is ready for mounting when the statue is removed.

Under the doctrine of equivalents, "a product or process that does not literally infringe upon the express terms

of a patent claim may nonetheless be found to infringe if there is 'equivalence' between the elements of the accused product or process and the claimed elements of the patented invention." *Depuy*, 2006 U.S. App. LEXIS 28673, 2006 WL 3346155 at *6. Infringement under the doctrine of equivalents has been defined in two primary ways: the "triple-identity test," which examines if the accused process: 1) performs the same function as the patented process; 2) operates in substantially the same manner; and 3) achieves substantially the same result; or the "insubstantial differences" test. *See Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 39-40, 117 S. Ct. 1040, 137 L. Ed. 2d 146 (1997). Determinations of infringement under the doctrine of equivalents are limited by two legal doctrines, prosecution history estoppel and the "all elements rule," each of which are questions of law. *See Depuy*, 2006 U.S. App. LEXIS 28673 2006 WL 3346155 at *3. The "all elements" rule requires that a court apply the doctrine of equivalents to each individual element of a claim, rather than to the invention as a whole, in order to "balance the doctrine of equivalents with the basic patent law principle that claim language defines the scope of an invention and every limitation is material." 2006 U.S. App. LEXIS 28673, [WL] at *7.

Looking at each disputed claim in turn, the undisputed evidence reveals that Ivoclar's product does not infringe the '530 Patent, either literally or under the doctrine of equivalents. There exists a genuine issue of material fact as to whether the Empress product employs a porcelain powder, literally or in its equivalent. While Ivoclar does not use a literal "statue" as defined in the '530 Patent, the Empress negative mold survives summary judgment under the doctrine of

equivalents. But the Empress product is not "ready for mounting" either literally or under a theory of equivalence, so summary judgment on non-infringement must be granted.

Porcelain Powder

There exists a genuine issue of material fact as to whether the ceramic ingot used by Empress literally infringes the claimed use of "porcelain powder." PSN presents testimony that the ceramic ingot has substantially identical chemical composition to porcelain dental powder. PSN has also produced the instruction manual for the Empress system, which describes the material as "leucite-reinforced glass-ceramic" where the "semi-finish product in powder form is then pressed into ingots and fired." Pltf. 56.1 Ex. P. Finally, PSN argues that the ceramic ingot is in a "molten" form at the time that it is pressed into the investment material, and is therefore in the same, or at least a similar, medium to the "slurry" that is applied in the '530 Patent.

Ivoclar, on the other hand, has produced evidence that the ceramic ingot undergoes a chemical change during the process, and cannot be returned to a porcelain powder state. Ivoclar compares the relationships between "porcelain powder" and the ceramic ingot to the relationship between sand and glass, and argues that the chemical transformation makes the ceramic ingot not a "powder" even under the construction determined by this Court. Whether the ceramic ingot is a powder is a genuine issue of material fact determinative of infringement, and cannot be decided on summary judgment.

Statue

There is no disputed fact that could lead a reasonable jury to conclude that Ivoclar uses a literal "statue." A statue is a *positive model* of the patient's tooth. The patented process takes an impression, or negative mold, of the patient's tooth using a gummy substance. From that negative mold, the patented process forms a positive model of the patient's tooth. The rest of the patented process continues using that same positive model, while the Empress process uses that positive mold to make negative model out of investment material. That negative model is not a statue, and is not used as the statue is used in the patented process. The Empress product does not literally infringe upon the element of the claimed process that employs the "statue."

But under the doctrine of equivalents, a reasonably jury could conclude that the combination of the initial model and the negative investment mold used in the Empress product are the equivalent of the '530 Patent statue. The doctrine of equivalents recognizes that "the language in the patent claims may not capture every nuance of the invention or describe with complete precision the range of its novelty." *Depuy*, 2006 U.S. App. LEXIS 28673, 2006 WL 3346155 at *6, *quoting Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 731, 122 S. Ct. 1831, 152 L. Ed. 2d 944 (2002). A reasonable jury could decide that the cylinder made of investment material, containing a negative space for the exact shape of the tooth veneer, is a mirror-image or inverse of the statue employed in the '530 Patent. By creating a mold from the impression of the patient's tooth, and then using extra steps to

create a negative mold, the Empress product could be interpreted to use an equivalent, mirror image, to the claimed "statue" for purposes of applying the porcelain. In this sense, while not conforming to the literal element of the '530 Patent claim, a reasonable jury could conclude that the hard stone mold plus the investment cylinder perform the same function, in the same way, with the same end result as does the '530 Patent statue.

Ready for Mounting

Summary judgment for Ivoclar on both literal and equivalent infringement is appropriate because no disputed fact that could lead a reasonable jury to conclude that the Empress veneer is "ready for mounting" when removed from the investment material. Under the construction of the claim determined in this Opinion, a veneer is "ready for mounting" when it is "ready to be fitted on and cemented to a patient's tooth." There is no dispute that the Empress veneer requires substantial finishing work after it is removed from the cylinder of investment material and before it is fitted and cemented to the patient's tooth. The Empress veneer requires that the porcelain sprue be removed from the veneer, and that the veneer be stained, glazed, and contoured, a process that, involves re-firing the veneer casing.

Use of doctrine of equivalents can be precluded as a matter of law. "Under the particular facts of a case, . . . if a theory of equivalence would entirely vitiate a particular claim element, partial or complete judgment should be rendered by the court." *Depuy*, 2006 U.S. App. LEXIS 28673, 2006 WL 3346155 at *7, *quoting*

Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 39 n.8, 117 S. Ct. 1040, 137 L. Ed. 2d 146 (1997). In the case of the tooth veneer, the specification stresses the importance of the presence of the statue during the finishing process. The parties do not dispute that the Empress process strips away the investment material prior to the commencement of the shaping, finishing, and glazing of the veneer. *See* Def. 56.1 Facts at P 44hh.[3] Considering the Empress process and the '530 Patent process equivalent renders the claim element "eroding away said statue from said porcelain veneer restoration leaving said restoration ready for mounting" meaningless. Put another way, while the Empress process may achieve the same result - a finished veneer - it does not do so in the same manner, and the investment material in the Empress process does not perform the same function as the "statue" in the '530 Patent. Under these facts, no reasonable jury could conclude that the Empress product is "ready for mounting" when the investment material is removed.

Conclusion

Having construed the disputed claims, the Ivoclar Empress product does not infringe upon the '530 Patent because the phrase "ready for mounting" cannot be so expanded to cover the process employed by Ivoclar. Ivoclar's Motion for Summary judgment on the issue of non-infringement is granted.

So ordered.

Virginia M. Kendall, United States District Judge

Northern District of Illinois

Date: December 7, 2006

Footnotes

[1]The October 11, 2005 Opinion was drafted by another judge in this district. This case transferred to the present judge on January 23, 2006 as part of the Executive Order creating this judge's calendar. The previous judge passed to this judge all information, including the visual aids presented to the Court by the parties during their in-court demonstration of the respective techniques.

[2] The Court's brief description of the Empress process is drawn from those portions of Ivoclar's Statement of Undisputed Facts that were admitted by Plaintiff, as well as the in-court demonstration material submitted by the parties.

[3]Curiously, both parties rely upon Ivoclar's "Instructions for Use" in support of their arguments. *See* Def. 56.1 Ex. 11. The diagrams in the Instructions show the Empress casing being set atop a die for finishing after the investment material has been removed, and possibly lightly cemented to the die. *See* Def. 56.1 Ex. 11 at "Contouring the Pressed Object/Finishing." Both parties devoted substantial briefing to the construction of the phrase "ready for mounting" but do not mention the possible re-employment of the original mold. The Court does not consider issues not raised by the parties, and therefore considers waived the potential use of a supporting mold during the Empress finishing process.

2007-1512

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

PSN ILLINOIS, LLC,
Plaintiff-Appellant,

v.

IVOCLAR VIVADENT, INC., MICRO DENTAL LABS, and NATIONAL DENTEX CORPORATION,
Defendants-Appellees,

and DENTSPLY INTERNATIONAL, INC.,
Defendant-Appellee,

and DEN-MAT CORPORATION,
Defendant-Appellee.

July 16, 2008, Decided

July 16, 2008, Filed

ORDER

A combined petition for panel rehearing and for rehearing en banc having been filed by the Appellant, and a response thereto having been invited by the court and filed by the Appellees, and the petition for rehearing and response, having been referred to the panel that heard the appeal, and thereafter the petition for rehearing en banc and response having been referred to the circuit judges who are in regular active service,

UPON CONSIDERATION THEREOF, it is

ORDERED that the petition for panel rehearing be, and the same hereby is, DENIED and it is further

ORDERED that the petition for rehearing en banc be, and the same hereby is, DENIED.

The mandate of the court will issue on July 23, 2008.

Dated: 07/16/2008

Federal Rules of Civil Procedure
Rule 56. Summary Judgment

(a) By a Claiming Party. A party claiming relief may move, with or without supporting affidavits, for summary judgment on all or part of the claim. The motion may be filed at any time after:

(1) 20 days have passed from commencement of the action; or

(2) the opposing party serves a motion for summary judgment.

(b) By a Defending Party. A party against whom relief is sought may move at any time, with or without supporting affidavits, for summary judgment on all or part of the claim.

(c) Serving the Motion; Proceedings. The motion must be served at least 10 days before the day set for the hearing. An opposing party may serve opposing affidavits before the hearing day. The judgment sought should be rendered if the pleadings, the discovery and disclosure materials on file, and any affidavits show that there is no genuine issue as to any material fact and that the movant is entitled to judgment as a matter of law.

(d) Case Not Fully Adjudicated on the Motion.

(1) ***Establishing Facts.*** If summary judgment is not rendered on the whole action, the court should, to the extent practicable, determine what material facts are not genuinely at issue. The court should so determine by examining the pleadings and evidence before it and

by interrogating the attorneys. It should then issue an order specifying what facts--including items of damages or other relief--are not genuinely at issue. The facts so specified must be treated as established in the action.

(2) ***Establishing Liability.*** An interlocutory summary judgment may be rendered on liability alone, even if there is a genuine issue on the amount of damages.

(e) Affidavits; Further Testimony.

(1) ***In General.*** A supporting or opposing affidavit must be made on personal knowledge, set out facts that would be admissible in evidence, and show that the affiant is competent to testify on the matters stated. If a paper or part of a paper is referred to in an affidavit, a sworn or certified copy must be attached to or served with the affidavit. The court may permit an affidavit to be supplemented or opposed by depositions, answers to interrogatories, or additional affidavits.

(2) ***Opposing Party's Obligation to Respond.*** When a motion for summary judgment is properly made and supported, an opposing party may not rely merely on allegations or denials in its own pleading; rather, its response must--by affidavits or as otherwise provided in this rule--set out specific facts showing a genuine issue for trial. If the opposing party does not so respond, summary judgment should, if appropriate, be entered against that party.

(f) When Affidavits Are Unavailable. If a party opposing the motion shows by affidavit that, for specified reasons, it cannot present facts essential to justify its opposition, the court may:

(1) deny the motion;

(2) order a continuance to enable affidavits to be obtained, depositions to be taken, or other discovery to be undertaken; or

(3) issue any other just order.

(g) Affidavit Submitted in Bad Faith. If satisfied that an affidavit under this rule is submitted in bad faith or solely for delay, the court must order the submitting party to pay the other party the reasonable expenses, including attorney's fees, it incurred as a result. An offending party or attorney may also be held in contempt.